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## CLAIMS

1. Equipment for the purification of gases employing one or several heat exchanging matrices where the gas in a regenerative process is heated to oxidation or decomposition temperature, characterised by that at least one of the heat exchanging matrices comprises a zone that is catalytically active in promoting reduction of nitrogen oxides.  
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2. Equipment for the purification of gases employing a single heat exchanging matrix where the gas is heated in a regenerative process to oxidation or decomposition temperature, characterised by that the heat exchanging matrix comprises two zones that are catalytically active and situated on each side of the hot centre zone of the matrix.  
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3. Equipment according to claims 1 or 2, characterised by that it comprises means for the supply of agents to the incoming gas flow that reduce nitrogen oxides.  
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4. Equipment according to claim 3, characterised by that the supply of reducing agent is interrupted for a short while in connection with change of direction of gas flow through the equipment.  
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5. Equipment according to claim 1, characterised by that supply of reducing agent is maintained only when the gas to be treated goes through the equipment in such a way that it passes a zone that is catalytically active before it reaches temperatures that are so high that oxidation or decomposition occurs.  
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